WTQA2001 Symposium-at-a-Glance
final 7/31/01

Sunday, August 12

8:00 am - 1:30 pm Registration for Short Courses

8:30 am - 12:00 pm **Short Course:** The Basics of Assessor Training for Everyone (Marlene Moore)

This ½ day session will provide data users, regulators, and laboratories the information necessary to assess against client-specific project data requirements. The session objective is to provide an overview of assessment practices. This overview provides the attendees with the basic concepts for being an assessor. The session will provide specific examples of assessment to project specific requirements. The course will define the difference between assessment and audits. The course includes practices used for assessing standards and project specific requirements such as NELAC, ISO/IEC 17025, PBMS, DQOs and MQOs.

8:30 am - 12:00 pm **Short Course:** Analytical Strategy for the RCRA Program (Barry Lesnik)

This course is directed toward professionals in both the regulatory and regulated communities who routinely deal with sampling and analysis issues for the RCRA Program. It would be helpful to have knowledge of the general principles of basic RCRA analytical methods. The purpose of this course is to attempt to correct several misconceptions that abound in both the regulatory and regulated communities about regulatory requirements regarding the selection and use of SW-846 methods for RCRA applications. Topics to be covered include: 1) what constitutes a RCRA Hazardous Waste; 2) driving reasons for performing RCRA analyses; 3) what SW-846 is and is not; 4) what constitutes an "EPA-approved" method; 5) flexibility of RCRA methods; 6) when the use of SW-846 methods is mandatory and when it is not; 7) a brief overview of the regulatory process; 8) comparison of SW-846 methods with CLP and Office of Water methods; 9) factors determining appropriate choice of analytical methods; and 10) what should be included in the analytical component of a RCRA Sampling and Analysis Plan.

1:00 pm - 4:00 pm **Short Course:** Regulation and Permit Writing Under PBMS (David Friedman)

Fostering the development and use of innovative, less costly approaches to compliance monitoring will require that EPA and the States change their regulatory approaches. To move from a command and control system that specifies how regulated facilities are to conduct the monitoring, to one that focuses on the performance to be achieved. This approach, which has been termed the Performance Based Measurement System (PBMS), will give regulated entities the flexibility to employ the most cost-effective procedure and technology for a particular situation. This course will train regulation and permit writers in how to write regulations in a PBMS framework. It will cover crafting PBMS regulatory language, and establishing appropriate maximum acceptable decision uncertainty levels.

9:00 am - 4:00 pm **Short Course:** Analytical Organic Mass Spectrometry (Bill Budde)

This course begins with a very brief overview of mass spectrometry (MS) and the various types of mass spectrometers commonly used and their major performance characteristics. It does <u>not</u> include a detailed discussion or mathematical treatment of the theory, construction, or principles of operation of mass spectrometers. Brief overviews of sample introduction techniques, especially combined chromatography/MS techniques, are given and these include GC/MS, LC/MS, SFC/MS, and CE/MS. The major emphasis of the course is on strategies and techniques used in analytical applications of organic mass spectrometry. Various topics are introduced including ionization techniques, ion introduction techniques, molecular weight determination, ion fragmentation, collision induced dissociation, some limitations of mass spectrometry, exact mass measurements, identification of compounds and alternatives to mass spectrometry, general analytical strategies, data acquisition strategies, and quantitative analysis.

9:00 am - 4:00 pm **Short Course:** Using Solid Phase Extraction to Reduce Testing Costs When Analyzing Ground, Surface and Waste Waters, and TCLP Leachates: Effective Implementation of Method 3535A (Bob Johnson, CEO Horizon Technology, Inc.)

Solid phase extraction (SPE) or Liquid Solid Extraction (LSE), as a sample preparation technique, offers many advantages over liquid-liquid extraction. These include reduced labor, reduced solvent consumption and hazardous waste, minimized worker contact with harmful solvents, reduced use of fragile glassware, reduced solvent concentration steps, and easy automation to achieve precision.

Today's SPE disks can extract dirty water samples without clogging. In recognition of the benefits of SPE, in 1997, the U.S. EPA issued "Method 3535A, Solid Phase Extraction" for use in conjunction with determinative methods, such as 8081 (organochlorine pesticides), 8082 (PCB's), 8061 (phthalates), and 8270 (semi-volatiles), for use with groundwater, wastewater and TCLP leachates. In 1999, EPA Method 1664A, was promulgated, and allows the use of SPE to extract oil and grease from water samples.

Due to its many benefits, SPE is gaining widespread use over liquid-liquid extraction. However, many labs are not yet taking full advantage of Method 3535A for the extraction of aqueous samples due to the confusion of how labs should properly implement SPE into their procedures.

This workshop will focus on providing the information you will need to justify, learn, conduct, and report performance of Method 3535A when extended to sample prep of the above mentioned methods. An excellent way to optimize lab productivity is with automation. A demonstration will be provided of a fully automated SPE System, which reduces operating costs, and provides more consistent, accurate results.

We will also provide participants copies or sources of relevant EPA documents.

Monday, August 13

7:00 am - 4:00 pm Registration Open

8:00 am - 12:00 pm SW-846 Workgroups **(closed meeting)**

9:00 am - 12:00 pm Certification Exams for Environmental Analytical Chemists and Technicians

8:00 am - 12:00 pm **DoD Workshop**: Improving Environmental Data Quality – What's New in Doing Business with DoD? (Jackie Sample, Chair DoD Environmental Data Quality Workgroup and Component Representatives)

The ultimate success of an environmental program or project depends on the quality of the environmental data collected and used in decision-making. DoD, along with its government and private sector partners, has developed new, streamlined approaches to obtaining effective data suitable for its intended use. This workshop will provide an overview of DoD environmental data quality improvements, including: focus on a graded, streamlined technical planning process (systematic planning); use of the Federal guidance for developing Quality Assurance Project Plans (QAPPs); optimization of long term monitoring, and using the new, unified DoD Laboratory Quality Systems Manual. Join DoD and representatives from all services to learn "what's new in doing business with DoD."

8:00 am - 12:00 pm **Short Course:** Immunoassay Field Testing (Karen Peluso)

This course will cover the current status and background of immunoassay field analytical technologies, including technical considerations, such as analytes, formats, product attributes, cost, specificity and cross reactivity. In addition, project considerations for successful application will be discussed. Some of the applications covered include brownfields/remedial investigations, site characterizations, remedial actions and state regulatory programs. The course will also discuss various case studies using the PCBs and PAHs test kits and provide a hands-

on demonstration of various products, including the new QuickTest® for Volatile Organic Halides in Water and siteLAB® for TPH Analysis.

12:00 pm - 1:30 pm	Lunch Break
2:00 pm - 4:30 pm	**Opening Plenary Session**:
2:00 pm - 2:30 pm	David Friedman, Barnes Johnson, Larry Keith - introductory remarks
2:30 pm - 3:00 pm	Matt Hale, Deputy Director, Office of Solid Waste
3:00 pm - 3:30 pm	Tim Curran, Deputy Director, Office of Air Quality Planning and Standards, Office of Air and Radiation
3:30 pm - 4:00 pm	Sylvia Lowrance, Acting Assistant Administrator, Office of Enforcement and Compliance Assurance
5:00 pm - 7:00 pm	Opening Reception and Table Top Displays

Tuesday, August 14

7:00 am - 5:00 pm	Registration Open
8:30 am - 10:00 am	**Information Quality Systems Session** Jeff Worthington, Session Chairperson
8:30 am - 9:00 am	*A Management System for Information Quality,* J. Worthington
9:00 am - 9:30 am	*The Data Quality Life Cycle for Environmental Information*, R. Runyon
9:30 am - 10:00 am	*Techniques for Assessing the Quality of Data in Data Warehouses,* M. Rublee
8:30 am - 10:00 am	**Organic I Session** Barry Lesnik, Session Chairperson
8:30 am - 9:00am	*Status of RCRA Organic Methods Program,* B. Lesnik
9:00 am - 9:30 am	*Application of Solid Phase Extraction and Large Volume Injection for Routine Analysis of Environmental Samples Via EPA Method 8270*, D. Dodson
9:30 am - 10:00 am	*Development of Capillary Electrophoresis Method for Phenoxyacid Herbicides and Phenols*, S. Li
10:00 am - 10:30 am	Break (organic posters/table top displays; authors available 10:00 - 11:00)

Organic Posters

Comparison of SW-846 and CLP Organic Methods within the Laboratory Environment, N. Gannon, and W. Doong

Analysis of Water for ppb Range Chlorinated Organics Using a Total Organic Chloride Analyzer, T. Lynn, M. Boggiano, L. Sacramore, D. Balog and A. Lynn

Low Level Detection of PCE in Monitoring Well Samples Using a Total Chlorine Based Field Method, T. Lynn, and K. Wright

Assessment of the Effects of Active Sites in Discrete Sampling, Purge and Trap Concentrators on Oxygenated Compounds, T. Roberts, R. Vitale and M. Mitchell

Effects of Purge and Trap Injection Techniques on Chromatography Peak Shape, G. Smith, and E. Heggs

Critical Analysis of USEPA Method 5035 Using a Robotic Vial Autosampler, G. Smith, and E. Heggs

Improved Phases for the GC Analysis of Chlorinated Pesticides, G. Stidsen, F. Dorman and L. Nolan

New Confirmational Column for the Analysis of Organophosphorus Pesticides, G. Stidsen, F. Dorman and L. Nolan

Fast Analysis of Semivolatile Compounds Following Method 8270, G. Stidsen, F. Dorman

Monitoring of Technogenic Pollution in the Environment, G. Ospanova

10:30 am - 12:00 pm	**EPA Data and Information Quality Improvement Efforts Session** Jeff Worthington, Session Chairperson
10:30 am - 11:00 am	*EPA Data Quality Strategic Planning,* C. Bethel

11:00 am - 11:30 am	*Intergovernmental Data Quality Task Force Progress*, M. Carter
11:30 am - 12:00 pm	*Developing a Common Approach to Electronic Data Deliverables*, T. Jover
10:30 am - 12:00 pm	**Organic Session I (cont.)** Barry Lesnik, Session Chairperson
10:30 am - 11:00 am	*MTBE Studies*, B. Lesnik, D. Anderson
11:00 am - 11:30 am	*GC Methods for Nitrogen-containing Compounds Using Nitrogen Chemiluminescent Detectors*, D. Gere, R. Trengove
11:30 am - 12:00 pm	*Evaluation of an Enzyme Immunoassay Test for the Screening of Dioxins and Furans at Wood Treatment Sites*, T. Crone, R. Harrison
12:00 pm - 1:30 pm	Lunch Break
1:30 pm - 3:00 pm	**Information Quality Integration and Case Studies,** Jeff Worthington, Session Chairperson
1:30 pm - 2:30 pm	*Data Resource Quality for Large Enterprises*, M. Brackett
2:30 pm - 3:00 pm	*Fact and Fiction in Environmental Data Quality*, R. Olivero, and C. Dempsey
1:30 pm - 3:00 pm	**Organic II Session** Barry Lesnik, Session Chairperson
1:30 pm - 2:00 pm	*HPLC/MS Methods Using Electrospray and APCI Interfaces*, A. Krynitsky
2:00 pm - 2:30 pm	*The New Role for LC/MS in Explosives Investigations*, L.Penfold
2:30 pm - 3:00 pm	*The Analysis of Carbamates Using Single Quad LC/MS*, J. Krol, and J. Romano
3:00 pm - 3:30 pm	Break (organic posters/table top displays; authors available 3:00 - 4:00)
3:30 pm - 5:00 pm	**NELAC/ACIL Session** Charles Brokopp and Larry Keith, Session Chairpersons
3:30 pm - 4:00 pm	*Strong Start for NELAP*, J. Hankins
4:00 pm - 4:30 pm	*NELAC Quality Systems: The Integration of ISO/IEC 17025 and PBMS*, S. Siders
4:30 pm - 5:00 pm	*Technical Aspects of the NELAC Proficiency Testing Program*, B. Burmeister
3:30 pm - 5:00 pm	**Inorganic Session** Rock Vitale, Session Chairperson
3:30 pm - 4:00 pm	*Status of RCRA Inorganic Methods Program*, B. Lesnik
4:00 pm - 4:30 pm	*Analysis of Environmental Samples by ICP-MS Using Dynamic Reaction Cell (DRC) Technology to Eliminate Interferences*, R. Wolf, Z. Grosser, and K. Neubauer
4:30 pm - 5:00 pm	*Speciation of Mercury in Soil and Sediment by Selective Solvent and Acid Extraction, Draft Method 3200*, M. Rahman, Y. Han, H. Boylan, D. Link, S. Shah and H.M. Kingston

Wednesday, August 15

7:00 am - 5:00 pm	Registration Open
8:30 am - 10:00 pm	**Air Source Emissions Measurement and Monitoring Session** Robin Segall, Session Chairperson
8:30 am - 9:00 am	*Characterizing PM-2.5 Emissions from Specific Source Categories*, J. Bursey, D. Dayton and D. Smith
9:00 am - 9:30 am	*Generation of Evaluation Standards for Performance of Monitoring Methods at Low Concentrations*, S. Kulkarni, M. Ranade and S. Wasson
9:30 am - 10:00 am	*Use of Optical Remote Sensing Devices in Characterizing Fugitive Emissions*, R. Hashmonay
8:30 am - 10:00 am	**DoD Session I** Fred McLean, Session Chairperson
8:30 am - 9:00 am	*Laboratory Control Sample (LCS) Study Update*, C. Groenjes
9:00 am - 9:30 am	*DoD Laboratory Quality Systems Manual (QSM) Update*, B. Batschelet
9:30 am - 10:00 am	*EPA/DoD Standardization Efforts (QA Matrix)*, R. Runyon
10:00 am - 10:30 am	Break (air/field/QA posters/table top displays; authors available 10:00 - 11:00)

Air/Field Posters

Definitive Data Generation from an On-site Laboratory Facility, L. Ekes, and P. Law
Rapid Sediment Characterization (RSC) Tools for Marine Sediment Assessments, V. Kirtay, D. Lapota and J. Leather
On-site Inspections of Superfund PRP Monitoring Procedures, J. Slayton, and S. Warner
Analysis of Low-Level (1 ppb - 20 ppb) Reactive Sulfurs in Air Samples, D. Shellow, and G. Stidsen

QA Posters

Quality, Environmental Health and Safety in the Analytical Laboratory, P. Mills, and A. Rosecrance
Pre-emptive Steps that Can Help Minimize the Cost and Time Involved for Data Validation, C. Ransom, A. Bailey and L. Bohannon
Using Concrete Chips as the Matrix for a Performance Evaluation Study, K. Robbins, and R. Forman
Performance-Based Quality Assurance Program for the Analysis of PAHs, PCB Congeners, and Chlorinated Pesticides in Marine Tissue and Sediment, M. Schantz, R. Parris and S. Wise
Organic Calibration RMs in Support of the Externalization of EPA's Water Supply and Water Pollution Proficiency Testing Programs, M. Schantz, B. Benner, J. Thomas and D. Poster
Negative Effects of the "Grand Mean" Calibration Approach on Generated Internal Surrogate Compound Recovery Limits, S. Zeiner, D. Lancaster and R. Vitale
Accuracy and Precision of Surrogates and Spikes Using a Robotic Autosampler in the GC/MS Analysis of VOCs, E. Boswell
Automated Verification and Validation of Caltrans Storm Water Analytical Results, R. Amano, L. Flynn, M Kayhanian and E. Othmer
EPA XML Laboratory Data Workgroup- Helping to Use Extensible Mark-up language (XML) Technology for Enhancing Data Delivery, Reporting and Processing Under a Unified XML Standard, D. Eng

10:30 am - 12:00 pm	**DoD Session II** Doug Scarborough, Session Chairperson
10:30 am - 11:00 am	*Analysis of Agent Degradation Products*, R. DiRienzo, and R. Wade
11:00 am -11:30 am	*Laboratory Health and Safety with DoD Samples*, M. Bruce, and S. Jackson
11:30 am - 12:00 pm	*On-Site Characterization of Explosive Residues in Soils and on Range Scrap Using GC-TID Analysis*, A. Hewitt, T. Jenkins, T. Ranney and M. Stutz
10:30 am - 12:00 pm	**Air Source Emissions Measurements and Monitoring Session (cont.)** Robin Segall, Session Chairperson
10:30 am - 11:00 am	*Development and Evaluation of Mercury CEMs for Combustion Emissions Monitoring*, J. Ryan
11:00 am - 11:30 am	*The Use of Accelerated Solvent Extraction for the Cleaning and Elution of XAD Resin*, B. Richter, J. Ezzell, R. Carlson and J. Peterson
11:30 am - 12:00 pm	*Sampling for Selected Aldehyde and Ketone Emissions from Stationary Sources*, D. Arthur
12:00 pm - 1:30 pm	Lunch Break
1:30 pm - 3:00 pm	**Field/New Technologies Session** Deana Crumbling, Session Chairperson
1:30 pm - 2:00 pm	*Intrinsic Tracers and Environmental Restoration*, R. Howe
2:00 pm - 2:30 pm	*Subsurface Profiling Systems: The Use of Effective Data for Making Defensible Project Decisions*, N. Tillman
2:30 pm - 3:00 pm	*Getting to the Bottom Line: Data Quality vs Decision Quality*, D. Crumbling
1:30 pm - 3:00 pm	**DoD Session III** Dave Koran & Tom Georgian, Session Chairpersons
1:30 pm - 2:00 pm	*A Simple Approach for the Determination of Measurement Quality Objectives and Assessing Data Quality Under PBMS*, C. Mao, K. Coats, D. Koran, and T. Georgian
2:00 pm - 2:30 pm	*MQOs and Measurement Uncertainty*, W. Ingersoll

2:30 pm - 3:00 pm *Performance Based Data Evaluation*, T. Georgian

3:00 pm - 3:30 pm Break (air/field/QA posters/table top displays; authors available 3:00 - 4:00)

3:30 pm - 5:00 pm **Field/New Technologies Session (cont.)** Deana Crumbling, Session Chairperson
- 3:30 pm - 4:00 pm *The Joy (and Pain) of "Over the Shoulder" Data*, C. Crume
- 4:00 pm - 4:30 pm *Rapid Detection of VOCs Using Direct Push Sampling with Direct Sampling Ion Trap Mass Spectrometry*, W. Davis, J. Costanza, M. Wise
- 4:30 pm - 5:00 pm *Rapid Adaptive Site Characterization: Following the Plume*, S. Pitkin

3:30 pm - 5:00 pm **Data Quality and Validation Under PBMS,** Navy ADI, Session Chairperson
- 3:30 pm - 4:00 pm *Practical Applications of PBMS*, C. Schultz, and J. Adelson
- 4:00 pm - 4:30 pm *ASTM PBMS Efforts*, L. Williams
- 4:30 pm - 5:00 pm *Misleading Aspects of Current Commonly Used QC Practices - Or Crazy Things We Do Every Day*, R. Burrows

Thursday, August 16

8:00 am - 12:00 pm Registration for Short Courses

8:30 am - 12:00 pm **Short Course:** Analytical Strategy for the RCRA Program (Barry Lesnik)

This course is directed toward professionals in both the regulatory and regulated communities who routinely deal with sampling and analysis issues for the RCRA Program. It would be helpful to have knowledge of the general principles of basic RCRA analytical methods. The purpose of this course is to attempt to correct several misconceptions that abound in both the regulatory and regulated communities about regulatory requirements regarding the selection and use of SW-846 methods for RCRA applications. Topics to be covered include: 1) what constitutes a RCRA Hazardous Waste; 2) driving reasons for performing RCRA analyses; 3) what SW-846 is and is not; 4) what constitutes an "EPA-approved" method; 5) flexibility of RCRA methods; 6) when the use of SW-846 methods is mandatory and when it is not; 7) a brief overview of the regulatory process; 8) comparison of SW-846 methods with CLP and Office of Water methods; 9) factors determining appropriate choice of analytical methods; and 10) what should be included in the analytical component of a RCRA Sampling and Analysis Plan.

1:00 pm - 4:00 pm **Short Course:** PBMS Training Workshop (Barry Lesnik)

This course has a dual focus, i.e., it will address PBMS from an Agency overview and more specifically how OSWER will further incorporate PBMS into its programs. Basic topics to be covered include: 1) What is PBMS? 2) What are the goals of PBMS? 3) How does PBMS work? 4) How will PBMS affect both the regulators and the regulated community? 5) How will PBMS change the current way of doing business? 6) Implementation of PBMS in OSWER and other Program Offices. Historically, the hazardous waste program offices in the US EPA, the Office of Solid Waste (OSW) and Superfund, have allowed the most flexibility of all of the Agency's offices in the use of analytical methods. This is because the Hazardous Waste Programs deal with a wide variety of media and matrices including stack emissions, ambient air, groundwater, organic liquids and sludges, incinerator ash, soils, etc. A flexible approach to the use of analytical measurements based on the demonstration of the ability to meet application-specific performance requirements, rather than on strict adherence to published methods, was necessary to meet program needs. This course discusses how this flexibility fits in with the PBMS approach for the Hazardous Waste Programs and what actions are being taken to move to a full PBMS approach including responsibilities of the regulators and the regulated community under PBMS.

1:00 pm - 4:00 pm **Short Course:** Field Operations and Records Management System (FORMS II Lite) (Willie Wong)

This course gives an overview of FORMS II Lite, a field automation software package that EPA's Analytical Operations and Data Quality Center (AOC) developed. This software has been successfully deployed for use in the EPA Regions, States and several Federal Agencies.

The purpose of FORMS II Lite is to:

* Automate the process of creating sample documentation in the field, like sample labels and chain of custody/ traffic reports;
* Reduce field time completing complex sample collection and transfer of documentation and;
* Facilitate electronic capture of information prior to and during environmental field sampling activities.

Who Should Attend: Field samplers and managers involved in sampling should take this course. Students can be managers and field personnel who are responsible for pre-sampling planning and on-site sampling. Students who conduct sampling on behalf of or in conjunction with Federal or State governments will be provided a copy of FORMS II Lite software and users manual at no cost. For private companies that are not affiliated with Federal/States sampling activities, usage of the software will be reviewed on case-by-case basis.

9:00 pm - 12:00 pm **Short Course:** Field Analytical (Deana Crumbling)

This 3-hour short course will present core concepts condensed from EPA's 2-day Field-Based Site Characterization Strategies course, including:

- the triad approach to streamlining site characterization/cleanup (systematic planning, dynamic work plans, and on-site measurements);
- using conceptual site models;
- designing sampling and analysis plans with a mix of field and fixed lab measurements so that generated data will be effective for making the specified project decisions, yet with the rapid turnaround time needed to support on-site decision-making; and
- information sources for practitioners.

8:00 am - 5:00 pm **DoD Course:** Detecting and Correcting Inappropriate Lab Practices (Nancy Wentworth, EPA director of Quality Staff, Jack Farrell, Analytical Excellence, and DOD experts)

Instances of improper, unethical, and illegal laboratory practices continue to be of paramount importance to public and private laboratory organizations. Data of known and documented quality to support cost effective environmental compliance decision-making is critical to protecting the public health and environment. It is absolutely crucial for laboratory management and regulators to thoroughly understand the problems, to establish and implement appropriate quality systems, to be able to detect occurrences early on, to correct the situation and more importantly prevent inappropriate practices.

The EPA, DOD and commercial laboratory community are continuing to partner on educational activities to minimize the occurrences of improper, unethical, and illegal practices. This one-day program focuses on these activities. Topics include:

- The importance of culture and value systems
- Root cause analysis
- Detecting these behaviors - tools and auditing practices
- Reviewing actual examples and how they were detected
- Effective prevention systems
- The role of an effective quality system
- Case studies and interactive exercises

The course format is informal and consists of lecture, large group discussion, small group exercises and problem solving. The presenters will share information and experiences as well as provide several real life scenarios in dilemma resolution. Participants are encouraged to bring their own situations and questions to share with the group. A course notebook will be provided for each participant.

9:00 am - 5:00 pm **NIST Workshop:** Proficiency Test Studies for US/EPA/State's Water Programs by NIST-Accredited Providers

This one-day working meeting will provide a forum for discussion of the provision of proficiency test studies for USEPA/State water programs by NIST accredited providers.

The USEPA historically conducted semiannual water proficiency evaluation studies to assess laboratories testing drinking water and wastewater. The EPA provision of these services is being phased out and replaced by a multiprovider system, often referred to as "Externalized PT Studies", in which interested states and private companies provide these services on a fee-basis. There are currently 12 accredited providers conducting PT studies in chemistry and microbiology program fields and radiochemistry has been added to the program. As with any new program, there are many issues to discuss and future directions to plot. This meeting is the first of a series of annual meetings intended for this program.

[References: U.S. Environmental Protection Agency "National Standards for Water Proficiency Testing Studies: Criteria Document, December 1998 (available from: USEPA, NERL, EERD, NWQAPB, 26 West M.L. King Drive, Room 525, Cincinnati OH 45268); NIST NVLAP Handbook 150 "NVLAP Procedures and General Requirements," 1994 edition, and 2001, Final Draft; NIST Handbook 150-19 "Chemical Calibration: Providers of Proficiency Testing", June 1999 (available at: http://ts.nist.gov/ts/htdocs/210/214/publications.htm)]

There are no registration fees for this meeting and attendees can procure lunch, coffee, etc. in hotel or other nearby facilities. Participants do not have to be registered for the WTQA meeting. **Please notify Reenie.Parris@NIST.gov if you plan to attend this meeting. Further information will be provided at: http://www.cstl.nist.gov/acd**

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